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ABSTRACT OF THE INVENTION

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present invention relates to methods for cytoplasmic naturally occurring male enhancement sterility and for restoration of male fertility and uses thereof in hybrid crop production. There is also disclosed a method for restoration of male fertility to cytoplasmic male sterile plants; which comprises the steps of: a) introducing into the nucleus of a plant cell a gene construct sequence encoding of a essentially consisting mitochondrial transit peptide fused upstream of and in frame with an edited form of a normal mitochondrial gene that is co-transcribed with an unusual CMS-associated mitochondrial gene; b) selecting for plant cells that have acquired the gene construct in step a); and c) inducing regeneration of selected plant cells to produce a mature plant.